

Mr. Soji Honma  
Heartland Automotive, LLC  
P.O. Box 648  
Greencastle, Indiana 46135

Re: **133-15489**  
Significant Source Modification to:  
Part 70 Operating Permit No.: **T 133-12495-00027**

Dear Mr. Honma:

Heartland Automotive, LLC was issued Part 70 operating permit T 133-12495-00027 on June 14, 2001, for a plastic automotive parts surface coating source. An application to modify the source was received on January 23, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

The modification consists of changing the coatings used at the existing surface coating booths SB-1 and SB-2. The VOC emissions from the following booths will be limited to less than 49.0 tons per twelve (12) consecutive month period:

- (b) Two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stacks SB-1 and SB-2, capacity: 62.5 plastic automotive parts per hour.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 Operating Permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Edward A. Longenberger, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
EAL/MES

cc: File - Putnam County  
Putnam County Health Department  
Air Compliance Section Inspector - Jim Thorpe  
Compliance Branch - Karen Nowak  
Administrative and Development - Lisa Lawrence  
Technical Support and Modeling - Michele Boner

## **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**Heartland Automotive, LLC  
300 South Warren Drive  
Greencastle, Indiana 46135**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Second Significant Source Modification 133-15489-00027	Sections Affected: A.2, D.1; Quarterly Report Form
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 11, 2002

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary plastic automotive parts surface coating source.

Responsible Official:	Soji Honma
Source Address:	300 South Warren Drive, Greencastle, Indiana 46135
Mailing Address:	P.O. Box 648, Greencastle, Indiana 46135
General Source Phone Number:	(765) 653-4263
SIC Code:	3089, 3999
County Location:	Putnam
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) door panel assembly line, identified as VF/EF/HS, consisting of three (3) processes, vacuum forming, exhausted through Stack C-1, edge folding, exhausted through Stack C-2, both installed in May 1989, and hot stake, exhausted through Stack C-3, installed in February 1999, capacity: 150 door panels per hour.
- (b) Two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stacks SB-1 and SB-2, capacity: 62.5 plastic automotive parts per hour.
- (c) One (1) adhesive application booth, identified as AB-1, installed in 2000, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stack C-4, capacity: 250 plastic automotive parts per hour.
- (d) One (1) touch-up paint booth, identified as TPB exhausted through Stack D, installed in 1997, capacity: 13.89 plastic automotive parts per hour.
- (e) One (1) surface coating line, with a capacity of 57.7 vehicles per hour, consisting of three (3) spray booths in series, using high-volume low-pressure (HVLP) spray equipment, equipped with a wet scrubber for overspray control and exhausting to Stacks S-4 through S-7.

### A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) door panel assembly line, identified as VF/EF/HS, consisting of three (3) processes, vacuum forming, exhausted through Stack C-1, edge folding, exhausted through Stack C-2, both installed in May 1989, and hot stake, exhausted through Stack C-3, installed in February 1999, capacity: 150 door panels per hour.
- (b) Two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stacks SB-1 and SB-2, capacity: 62.5 plastic automotive parts per hour.
- (c) One (1) adhesive application booth, identified as AB-1, installed in 2000, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stack C-4, capacity: 250 plastic automotive parts per hour.
- (d) One (1) touch-up paint booth, identified as TPB exhausted through Stack D, installed in 1997, capacity: 13.89 plastic automotive parts per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Volatile Organic Compounds [326 IAC 8-1-6]

- (a) Pursuant to 326 IAC 8-1-6, Best Available Control Technology (BACT) for the two (2) surface coating booths (SB-1 and SB-2) has been determined to be:
  - (1) The total VOC delivered to the applicators, including coatings, dilution solvents, and cleaning solvents, shall be limited to less than 49.0 tons per twelve (12) consecutive month period;
  - (2) The method of application at the two (2) surface coating booths (SB-1 and SB-2) shall be performed with high volume-low pressure (HVLP) spray applicators or the equivalent; and
  - (3) The following management and work practices shall apply:
    - (A) Operator training course.
    - (B) Spray gun cleaning.
    - (C) The cleanup solvent containers used to transport solvent from drums/containers to work stations be closed containers having soft gasketed closures.
    - (D) The application equipment operators shall be instructed and trained on the methods and practices utilized to minimize spillage on the floor and over application.
    - (E) Storage containers used to store VOC containing materials shall be kept covered when not in use.

- (F) Cleanup solvents will be reused in the process as much as possible to reduce hazardous waste and the related impact on the environment.
- (b) Any change or modification which would increase the potential to emit VOC from the adhesive application booth, known as AB-1, to twenty-five (25) tons per year or more, shall obtain prior approval from IDEM, OAQ.

**D.1.2 HAPs [326 IAC 2-4.1-1]**

- (a) The total amount of any single HAP and combination of HAPs delivered to the applicators of the two (2) surface coating booths (SB-1 and SB-2) shall be limited to less than ten (10) and less than twenty-five (25) tons per twelve (12) consecutive month period respectively. Therefore, the requirements of 326 IAC 2-4.1-1 (New source toxics control) do not apply.
- (b) Any change or modification which would increase the potential to emit a single HAP or a combination of HAPs from the adhesive application booth, known as AB-1, to ten (10) tons per year or more or twenty-five (25) tons per year or more, respectively, shall obtain prior approval from IDEM, OAQ.

**D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]**

The PM from the door panel assembly line (VF/EF/HS), the touch-up paint booth (TPB), the adhesive application booth (AB-1), and the two (2) surface coating booths (SB-1 and SB-2) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

**D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the adhesive application booth (AB-1), two (2) surface coating booths (SB-1 and SB-2) and any control devices.

**Compliance Determination Requirements**

**D.1.5 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)**

Compliance with the VOC and HAPs usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

**D.1.6 VOC Emissions**

Compliance with Condition D.1.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

**D.1.7 HAPs Emissions**

Compliance with Condition D.1.2 shall be demonstrated within 30 days of the end of each month based on the HAPs usage for the most recent twelve (12) month period.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.8 Particulate Matter (PM)**

In order to comply with Condition D.1.3, the dry filters for PM overspray control shall be in operation at all times when the adhesive application booth (AB-1) and the two (2) surface coating booths (SB-

1 and SB-2) are in operation.

#### D.1.9 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks C-4, SB-1 and SB-2 while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.1.10 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 (a) and (b) and D.1.2 (a) and (b), the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAPs usage limits and usage requirements and/or the VOC and HAPs emission limits and emission requirements established in Conditions D.1.1 and D.1.2.
  - (1) The amount of VOC in each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month; and
  - (5) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.1.8 and D.1.9, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.



#### D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a) and D.1.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**Part 70 Quarterly Report**

Source Name: Heartland Automotive, LLC  
Source Address: 300 South Warren Drive, Greencastle, Indiana 46135  
Mailing Address: P.O. Box 648, Greencastle, Indiana 46135  
Part 70 Permit No.: T 133-12495-00027  
Facility: Two (2) Surface Coating Booths (SB-1 and SB-2)  
Parameter: Total VOC delivered to the applicators  
Limit: Less than 49.0 tons per twelve (12) consecutive month period

YEAR: \_\_\_\_\_

Month	VOC (tons)	VOC (tons)	VOC (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for Part 70 Significant Source and Significant Permit Modifications**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Heartland Automotive, LLC</b>
<b>Source Location:</b>	<b>300 South Warren Drive, Greencastle, Indiana 46135</b>
<b>County:</b>	<b>Putnam</b>
<b>SIC Code:</b>	<b>3089</b>
<b>Operation Permit No.:</b>	<b>T 133-12495-00027</b>
<b>Operation Permit Issuance Date:</b>	<b>June 14, 2001</b>
<b>Significant Source Modification No.:</b>	<b>133-15489-00027</b>
<b>Significant Permit Modification No.:</b>	<b>133-15759-00027</b>
<b>Permit Reviewer:</b>	<b>Edward A. Longenberger</b>

The Office of Air Quality (OAQ) has reviewed a modification application from Heartland Automotive, LLC relating to the modification of existing surface coating booths SB-1 and SB-2.

#### **History**

Heartland Automotive, LLC was issued a Part 70 permit on June 14, 2001. On January 23, 2002, Heartland Automotive, LLC submitted an application to the OAQ requesting to increase production at the existing surface coating booths SB-1 and SB-2. The booths were limited to less than a total of twenty-five (25) tons per year of VOC, in order to make the requirements of 326 IAC 8-1-6 not applicable. As a result of this modification, the potential to emit VOC from the two booths, which coat plastic automotive parts, is greater than twenty-five (25) tons per year. Therefore, the two (2) surface coating booths (SB-1 and SB-2) are subject to the Best Available Control Technology (BACT) requirements. The source currently uses HVLP applicators at these booths, and the facility description has been updated accordingly. The source will also use adhesives with a lower VOC content at the existing adhesive booth AB-1.

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Recommendation**

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 23, 2002. Additional information was received on March 7, 2002 and via telephone on April 10, 2002 and April 22, 2002.

## Emission Calculations

See pages 1 through 3 of 3 of Appendix A of this document for detailed emissions calculations.

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	7.30
PM <sub>10</sub>	7.30
SO <sub>2</sub>	-
VOC	126
CO	-
NO <sub>x</sub>	-

HAPs	Potential To Emit (tons/year)
Xylene	22.8
MIBK	1.56
MEK	0.713
Toluene	51.9
Ethyl Benzene	5.77
Glycol Ethers	0.357
TOTAL	83.2

## Justification for Modification

The Part 70 Operating Permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(2), because the modification is subject to the requirements of 326 IAC 8-1-6.

The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification (SPM 133-15759-00027) in accordance with 326 IAC 2-7-12(d)(1), because the modification requires a case-by-case determination of an emission limit or standard

(BACT determination pursuant to 326 IAC 8-1-6). The Significant Permit Modification will give the source approval to operate the proposed emission unit.

### County Attainment Status

The source is located in Putnam County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Putnam County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Putnam County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	14.2
PM <sub>10</sub>	15.3
SO <sub>2</sub>	0.144
VOC	248.84
CO	20.2
NO <sub>x</sub>	24.1

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Technical Support Documents for T 133-12495-00027 and SSM 133-13901-00027.

#### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Proposed Modification	2.87	2.87	-	49.0	-	-	less than 10/25
PSD Threshold Level	250	250	250	250	250	250	-

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The limited potential to emit of VOC for the entire source will still be less than two-hundred fifty (250) tons per year:

The two (2) surface coating booths, identified as SB-1 and SB-2, were previously limited to less than a total of twenty-five (25) tons per year of VOC. The booths will now be limited to less than 49.0 tons per year, so the increase in VOC emissions from SB-1 and SB-2 is 24.0 tons per year.

The potential to emit of VOC from the adhesive booth (AB-1) was 24.9 tons per year. The company has opted to use low VOC adhesives at this booth. The result is a VOC potential to emit from AB-1 of 1.39 tons per year. The decrease in potential emissions from AB-1 is 23.51 tons per year.

The net increase in the potential to emit VOC as a result of this modification is:

$$24.0 - 23.51 = 0.49 \text{ tons per year}$$

Which brings the limited potential to emit VOC from the entire source to 249.33 tons per twelve (12) consecutive month period. Therefore, this source is still an existing minor source pursuant to 326 IAC 2-2.

### Federal Rule Applicability

- (a) This significant modification does not involve a pollutant-specific emissions unit with the potential to emit after control in an amount equal to or greater than 100 tons per year. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.
- (b) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed modification.

### State Rule Applicability - Individual Facilities

#### 326 IAC 2-4.1-1 (New Source Toxics Control)

The total HAP emissions from the two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, are still limited to less than ten (10) tons per twelve (12) consecutive month period for any single HAP and less than twenty-five (25) tons per twelve (12) consecutive month period for combination HAPs. Therefore, the requirements of 326 IAC 2-4.1-1 are not applicable.

#### 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The two (2) surface coating booths, identified as SB-1 and SB-2, were limited to less than a total of twenty-five (25) tons per year of VOC, in order to make the requirements of 326 IAC 8-1-6 not applicable. As a result of this modification, the potential to emit VOC from the two (2) surface coating booths (SB-1 and SB-2), which coat plastic automotive parts, is greater than twenty-five (25) tons per year. Therefore, the two (2) surface coating booths (SB-1 and SB-2) are subject to the Best Available Control Technology (BACT) requirements, pursuant to 326 IAC 8-1-6.

A top-down BACT analysis from Heartland Automotive, LLC was received on January 23, 2002. The BACT analysis evaluated four (4) options: installation of an electrostatic painting system, using water-based paints, installation of a catalytic incinerator, and the use of HVLP applicators. The source has agreed to limit the VOC emissions from the surface coating line to less than 49.0 tons per year. This baseline was used for the BACT analysis.

Electrostatic painting is not technically feasible for this operation since the object being coated must conduct electricity. The use of water-based paints is not technically feasible because such paints will not provide a finish that meets customer specifications.

Catalytic incineration, while technically feasible, is not economically feasible due to the prohibitive cost of \$5,258 per ton of VOC removed. Cost information for this option is detailed in the following BACT Cost Analysis:

#### Capital Cost

Option	Base Price	Direct Cost	Indirect Cost	Total
Catalytic Incineration	\$260,445	\$80,000	\$27,000	\$367,445

**Annual Operating, Maintenance & Recovery Cost**

Option	Direct Cost	Indirect Cost	Capital Recovery Cost	Total
Catalytic Incineration	\$128,208	\$35,000	\$91,861.25	\$255,069.65

**Evaluation**

Option	Potential Emissions (tons/yr)	Emissions Removed (tons/yr)	Control Efficiency (%)	\$/ton removed
Catalytic Incineration	49	48.51	99.0	\$5,258

BACT for the two (2) surface coating booths (SB-1 and SB-2) has been determined to be:

- (a) The total VOC delivered to the applicators, including coatings, dilution solvents, and cleaning solvents, shall be limited to less than 49.0 tons per twelve (12) consecutive month period;
- (b) The method of application at the two (2) surface coating booths (SB-1 and SB-2) shall be performed with high volume-low pressure (HVLP) spray applicators or the equivalent; and
- (c) The following management and work practices shall apply:
  - (1) Operator training course.
  - (2) Spray gun cleaning.
  - (3) The cleanup solvent containers used to transport solvent from drums/containers to work stations be closed containers having soft gasketed closures.
  - (4) The application equipment operators shall be instructed and trained on the methods and practices utilized to minimize spillage on the floor and over application.
  - (5) Storage containers used to store VOC and/or HAPs containing materials shall be kept covered when not in use.
  - (6) Cleanup solvents will be reused in the process as much as possible to reduce hazardous waste and the related impact on the environment.

**Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.



Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no changes to the compliance monitoring requirements for the two (2) surface coating booths (SB-1 and SB-2), as a result of this modification.

### Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) door panel assembly line, identified as VF/EF/HS, consisting of three (3) processes, vacuum forming, exhausted through Stack C-1, edge folding, exhausted through Stack C-2, both installed in May 1989, and hot stake, exhausted through Stack C-3, installed in February 1999, capacity: 150 door panels per hour.
- (b) Two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, equipped with ~~air-atomizing~~ **HVLP** spray applicators and dry filters for PM overspray control, exhausted through Stacks SB-1 and SB-2, capacity: 62.5 plastic automotive parts per hour.
- (c) One (1) adhesive application booth, identified as AB-1, installed in 2000, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stack C-4, capacity: 250 plastic automotive parts per hour.
- (d) One (1) touch-up paint booth, identified as TPB exhausted through Stack D, installed in 1997, capacity: 13.89 plastic automotive parts per hour.
- (e) One (1) surface coating line, with a capacity of 57.7 vehicles per hour, consisting of three (3) spray booths in series, using high-volume low-pressure (HVLP) spray equipment, equipped with a wet scrubber for overspray control and exhausting to Stacks S-4 through S-7.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) door panel assembly line, identified as VF/EF/HS, consisting of three (3) processes, vacuum forming, exhausted through Stack C-1, edge folding, exhausted through Stack C-2, both installed in May 1989, and hot stake, exhausted through Stack C-3, installed in February 1999, capacity: 150 door panels per hour.
- (b) Two (2) surface coating booths, identified as SB-1 and SB-2, installed in 1999, equipped with ~~air atomizing~~ HVLP spray applicators and dry filters for PM overspray control, exhausted through Stacks SB-1 and SB-2, capacity: 62.5 plastic automotive parts per hour.
- (c) One (1) adhesive application booth, identified as AB-1, installed in 2000, equipped with HVLP spray applicators and dry filters for PM overspray control, exhausted through Stack C-4, capacity: 250 plastic automotive parts per hour.
- (d) One (1) touch-up paint booth, identified as TPB exhausted through Stack D, installed in 1997, capacity: 13.89 plastic automotive parts per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Volatile Organic Compounds [326 IAC 8-1-6]

- (a) Pursuant to 326 IAC 8-1-6, Best Available Control Technology (BACT) for the two (2) surface coating booths (SB-1 and SB-2) has been determined to be:

- (1) The total VOC delivered to the applicators, including coatings, dilution solvents, and cleaning solvents, shall be limited to less than 49.0 tons per twelve (12) consecutive month period;
- (2) The method of application at the two (2) surface coating booths (SB-1 and SB-2) shall be performed with high volume-low pressure (HVLP) spray applicators or the equivalent; and
- (3) The following management and work practices shall apply:
  - (A) Operator training course.
  - (B) Spray gun cleaning.
  - (C) The cleanup solvent containers used to transport solvent from drums/containers to work stations be closed containers having soft gasketed closures.
  - (D) The application equipment operators shall be instructed and trained on the methods and practices utilized to minimize spillage on the floor and over application.

- (E) **Storage containers used to store VOC containing materials shall be kept covered when not in use.**
- (F) **Cleanup solvents will be reused in the process as much as possible to reduce hazardous waste and the related impact on the environment.**
- (a) ~~The total amount of VOC delivered to the applicators of the two (2) surface coating booths (SB-1 and SB-2) shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirements in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) do not apply.~~
- (b) Any change or modification which would increase the potential to emit VOC from the adhesive application booth, known as AB-1, to twenty-five (25) tons per year or more, shall obtain prior approval from IDEM, OAQ.

**D.1.5 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)**

Compliance with the VOC **and HAPs** usage limitations contained in Conditions D.1.1 **and D.1.2** shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**Part 70 Quarterly Report**

Source Name: Heartland Automotive, LLC  
Source Address: 300 South Warren Drive, Greencastle, Indiana 46135  
Mailing Address: P.O. Box 648, Greencastle, Indiana 46135  
Part 70 Permit No.: T 133-12495-00027  
Facility: Two (2) Surface Coating Booths (SB-1 and SB-2)  
Parameter: Total VOC delivered to the applicators  
Limit: Less than ~~49.0~~ ~~twenty-five (25)~~ tons per twelve (12) consecutive month period

YEAR: \_\_\_\_\_

Month	VOC (tons)	VOC (tons)	VOC (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. **133-15489-00027**.

## BACT Cost Analysis

Facility Name: Heartland Automotive, LLC  
Location: Greencastle, Indiana  
Permit No.: SSM 133-15489-00027  
Permit Reviewer: MES

### Capital Cost

Option	Base Price	Direct Cost	Indirect Cost	Total
Catalytic Incineration	\$260,445	\$80,000	\$27,000	\$367,445

### Annual Operating, Maintenance & Recovery Cost

Option	Direct Cost	Indirect Cost	Capital Recovery Cost	Total
Catalytic Incineration	\$128,208	\$35,000	\$91,861.25	\$255,069.65

### Evaluation

Option	Potential Emissions (tons/yr)	Emissions Removed (tons/yr)	Control Efficiency (%)	\$/ton removed
Catalytic Incineration	49	48.51	99	\$5,258

### Methodology:

Emissions removed = (potential emissions)\*(control efficiency)  
\$/ton removed = total annual cost/emissions removed

The cost breakdown is as follows:

#### 1. Capital Cost

- a) Base price: purchase price, auxiliary equipment, instruments, controls, taxes and freight.

- b) Direct installation cost: foundations/supports, erection/handling, electrical, piping, insulation, painting, site preparation and building/facility.
- c) Indirect installation cost: engineering, supervision, construction/filed expenses, construction fee, start up, performance test, model study and contingencies.

**2. Annual Cost**

- a) Direct operating cost: operating labor (operator, supervisor), labor and material maintenance, operating materials, utilities (electricity, gas).
- b) Indirect operating cost: overhead, property tax, insurance, administration and capital recovery cost (for X yrs life of the system at X% interest rate).

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Name: Heartland Automotive, LLC**  
**Address City IN Zip: 300 South Warren Drive, Greencastle, Indiana 46135**  
**Part 70 SSM: 133-15489**  
**Plt ID: 133-00027**  
**Reviewer: Edward A. Longenberger**  
**Date: January 23, 2002**

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
<b>Door Panel Color Mix #1</b>																
Gray (400S50923)	8.54	75.30%	0.0%	75.3%	0.0%	24.7%	0.04929	62.500	6.43	6.43	19.81	475.41	86.76	7.11	26.03	75%
Thinner (S-3949)	7.22	100.00%	0.0%	100.0%	0.0%	0.0%	0.01971	62.500	7.22	7.22	8.90	213.51	38.96	0.00	N/A	75%
<b>R-T-S</b>	<b>8.16</b>	<b>81.54%</b>	<b>0.0%</b>	<b>81.5%</b>	<b>0.0%</b>	<b>17.6%</b>	<b>0.06900</b>	<b>62.500</b>	<b>6.66</b>	<b>6.66</b>	<b>28.70</b>	<b>688.91</b>	<b>125.73</b>	<b>7.11</b>	<b>37.73</b>	<b>75%</b>
<b>Door Panel Color Mix #2</b>																
Beige (400S50924)	8.68	74.70%	0.0%	74.7%	0.0%	25.3%	0.04857	62.500	6.48	6.48	19.68	472.40	86.21	7.30	25.63	75%
Thinner (S-3949)	7.22	100.00%	0.0%	100.0%	0.0%	0.0%	0.01943	62.500	7.22	7.22	8.77	210.41	38.40	0.00	N/A	75%
<b>R-T-S</b>	<b>8.26</b>	<b>81.02%</b>	<b>0.0%</b>	<b>81.0%</b>	<b>0.0%</b>	<b>18.1%</b>	<b>0.06800</b>	<b>62.500</b>	<b>6.69</b>	<b>6.69</b>	<b>28.45</b>	<b>682.81</b>	<b>124.61</b>	<b>7.30</b>	<b>37.04</b>	<b>75%</b>
<b>Visor Mix</b>																
Black (89251)	7.60	75.00%	0.0%	75.0%	0.0%	25.0%	0.00171	62.500	5.70	5.70	0.61	14.66	2.67	0.22	22.80	75%
Thinner (S-5204)	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00069	62.500	7.25	7.25	0.31	7.46	1.36	0.00	N/A	75%
<b>R-T-S</b>	<b>7.50</b>	<b>81.90%</b>	<b>0.0%</b>	<b>81.9%</b>	<b>0.0%</b>	<b>17.9%</b>	<b>0.00240</b>	<b>62.500</b>	<b>6.14</b>	<b>6.14</b>	<b>0.92</b>	<b>22.11</b>	<b>4.04</b>	<b>0.22</b>	<b>34.40</b>	<b>75%</b>
<b>Defroster Grill Color Mix #1</b>																
Subaru Black (96161)	7.60	74.00%	0.0%	74.0%	0.0%	26.0%	0.00019	62.500	5.62	5.62	0.07	1.57	0.29	0.03	21.63	75%
Thinner (S-5204)	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00007	62.500	7.25	7.25	0.03	0.81	0.15	0.00	N/A	75%
<b>R-T-S</b>	<b>7.50</b>	<b>81.18%</b>	<b>0.0%</b>	<b>81.2%</b>	<b>0.0%</b>	<b>18.6%</b>	<b>0.00026</b>	<b>62.500</b>	<b>6.09</b>	<b>6.09</b>	<b>0.10</b>	<b>2.37</b>	<b>0.43</b>	<b>0.03</b>	<b>32.78</b>	<b>75%</b>
<b>Defroster Grill Color Mix #2</b>																
Brown (89242)	7.90	74.00%	0.0%	74.0%	0.0%	26.0%	0.00019	62.500	5.85	5.85	0.07	1.63	0.30	0.03	22.48	75%
Thinner (S-5204)	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00007	62.500	7.25	7.25	0.03	0.81	0.15	0.00	N/A	75%
<b>R-T-S</b>	<b>7.71</b>	<b>80.98%</b>	<b>0.0%</b>	<b>81.0%</b>	<b>0.0%</b>	<b>18.6%</b>	<b>0.00026</b>	<b>62.500</b>	<b>6.25</b>	<b>6.25</b>	<b>0.10</b>	<b>2.44</b>	<b>0.44</b>	<b>0.03</b>	<b>33.64</b>	<b>75%</b>
<b>B PLR (Primer)</b>																
Dark Gray (F1202)	8.26	84.00%	0.0%	84.0%	0.0%	16.0%	0.00395	62.500	6.94	6.94	1.71	41.10	7.50	0.36	43.37	75%
Toluene	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00276	62.500	7.25	7.25	1.25	30.06	5.49	0.00	N/A	75%
<b>R-T-S</b>	<b>7.84</b>	<b>90.09%</b>	<b>0.0%</b>	<b>90.1%</b>	<b>0.0%</b>	<b>9.4%</b>	<b>0.00671</b>	<b>62.500</b>	<b>7.07</b>	<b>7.07</b>	<b>2.97</b>	<b>71.16</b>	<b>12.99</b>	<b>0.36</b>	<b>75.08</b>	<b>75%</b>
<b>B PLR (Color 1)</b>																
Off Black (K2023)	8.37	72.60%	0.0%	72.6%	0.0%	27.4%	0.00783	62.500	6.08	6.08	2.97	71.35	13.02	1.23	22.18	75%
Toluene	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00548	62.500	7.25	7.25	2.48	59.59	10.88	0.00	N/A	75%
<b>R-T-S</b>	<b>7.91</b>	<b>82.94%</b>	<b>0.0%</b>	<b>82.9%</b>	<b>0.0%</b>	<b>16.1%</b>	<b>0.01331</b>	<b>62.500</b>	<b>6.56</b>	<b>6.56</b>	<b>5.46</b>	<b>130.94</b>	<b>23.90</b>	<b>1.23</b>	<b>40.70</b>	<b>75%</b>
<b>B PLR (Color 2)</b>																
DG Brown (K6053)	8.81	58.62%	0.0%	58.6%	0.0%	41.4%	0.00758	62.500	5.16	5.16	2.45	58.71	10.71	1.89	12.48	75%
Toluene	7.25	100.00%	0.0%	100.0%	0.0%	0.0%	0.00531	62.500	7.25	7.25	2.40	57.69	10.53	0.00	N/A	75%
<b>R-T-S</b>	<b>8.17</b>	<b>73.74%</b>	<b>0.0%</b>	<b>73.7%</b>	<b>0.0%</b>	<b>24.3%</b>	<b>0.01288</b>	<b>62.500</b>	<b>6.02</b>	<b>6.02</b>	<b>4.85</b>	<b>116.41</b>	<b>21.24</b>	<b>1.89</b>	<b>24.74</b>	<b>75%</b>

		PM	Control Efficiency	80.00%			
State Potential Emissions	Add worst case coating to all solvents		Uncontrolled	28.70	688.91	125.73	7.30
			Controlled	28.70	688.91	125.73	1.46
METHODOLOGY		VOC limited to less than 49.0 tons per year, which results in worst case PM emissions of 2.87 tons per year					

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used



**Appendix A: Emission Calculations**  
**HAP Emission Calculations**

**Company Name: Heartland Automotive, LLC**  
**Address City IN Zip: 300 South Warren Drive, Greencastle, Indiana 46135**  
**Part 70 SSM: 133-15489**  
**Plt ID: 133-00027**  
**Reviewer: Edward A. Longenberger**  
**Date: January 23, 2002**

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % MIBK	Weight % MEK	Weight % Toluene	Weight % Ethyl Benzene	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (tons/yr)	MIBK Emissions (tons/yr)	MEK Emissions (tons/yr)	Toluene Emissions (tons/yr)	Ethyl Benzene Emissions (tons/yr)	Glycol Ethers Emissions (tons/yr)	Methanol Emissions (tons/yr)
<b>Door Panel Color Mix #1</b>																	
Gray (400S50923)	8.54	0.04929	62.500	10.00%	0.00%	0.00%	45.00%	5.00%	0.00%	0.00%	11.522	0.000	0.000	51.850	5.761	0.000	0.000
Thinner (S-3949)	7.22	0.01971	62.500	29.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.300	1.559	0.000	0.000	0.000	0.000	0.000
											<b>22.822</b>	<b>1.559</b>	<b>0.000</b>	<b>51.850</b>	<b>5.761</b>	<b>0.000</b>	<b>0.000</b>
<b>Door Panel Color Mix #2</b>																	
Beige (400S50924)	8.68	0.04857	62.500	10.00%	0.00%	0.00%	45.00%	5.00%	0.00%	0.00%	11.541	0.000	0.000	51.936	5.771	0.000	0.000
Thinner (S-3949)	7.22	0.01943	62.500	29.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.136	1.536	0.000	0.000	0.000	0.000	0.000
											<b>22.677</b>	<b>1.536</b>	<b>0.000</b>	<b>51.936</b>	<b>5.771</b>	<b>0.000</b>	<b>0.000</b>
<b>Visor Mix</b>																	
Black (89251)	7.60	0.00171	62.500	5.00%	0.00%	20.00%	10.00%	1.00%	10.00%	0.00%	0.178	0.000	0.713	0.357	0.036	0.357	0.000
Thinner (S-5204)	7.25	0.00069	62.500	29.00%	0.00%	0.00%	29.00%	0.00%	0.00%	0.00%	0.395	0.000	0.000	0.395	0.000	0.000	0.000
											<b>0.573</b>	<b>0.000</b>	<b>0.713</b>	<b>0.751</b>	<b>0.036</b>	<b>0.357</b>	<b>0.000</b>
<b>Defroster Grill Color Mix #1</b>																	
Subaru Black (96161)	7.60	0.00019	62.500	5.00%	0.00%	20.00%	10.00%	1.00%	10.00%	0.00%	0.019	0.000	0.077	0.039	0.004	0.039	0.000
Thinner (S-5204)	7.25	0.00007	62.500	29.00%	0.00%	0.00%	29.00%	0.00%	0.00%	0.00%	0.043	0.000	0.000	0.043	0.000	0.000	0.000
											<b>0.062</b>	<b>0.000</b>	<b>0.077</b>	<b>0.081</b>	<b>0.004</b>	<b>0.039</b>	<b>0.000</b>
<b>Defroster Grill Color Mix #2</b>																	
Brown (89242)	7.90	0.00019	62.500	5.00%	0.00%	20.00%	10.00%	1.00%	10.00%	0.00%	0.020	0.000	0.080	0.040	0.004	0.040	0.000
Thinner (S-5204)	7.25	0.00007	62.500	29.00%	0.00%	0.00%	29.00%	0.00%	0.00%	0.00%	0.043	0.000	0.000	0.043	0.000	0.000	0.000
											<b>0.063</b>	<b>0.000</b>	<b>0.080</b>	<b>0.083</b>	<b>0.004</b>	<b>0.040</b>	<b>0.000</b>
<b>B PLR (Primer)</b>																	
Dark Gray (F1202)	8.26	0.00395	62.500	7.00%	10.00%	0.00%	56.00%	0.00%	0.00%	0.00%	0.625	0.893	0.000	5.000	0.000	0.000	0.000
Toluene	7.25	0.00276	62.500	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.000	0.000	0.000	5.486	0.000	0.000	0.000
											<b>0.625</b>	<b>0.893</b>	<b>0.000</b>	<b>10.487</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
<b>B PLR (Color 1)</b>																	
Off Black (K2023)	8.37	0.00783	62.500	6.00%	7.00%	0.00%	0.00%	1.76%	0.00%	0.00%	1.076	1.256	0.000	0.000	0.316	0.000	0.000
Toluene	7.25	0.00548	62.500	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.000	0.000	0.000	10.875	0.000	0.000	0.000
											<b>1.076</b>	<b>1.256</b>	<b>0.000</b>	<b>10.875</b>	<b>0.316</b>	<b>0.000</b>	<b>0.000</b>
<b>B PLR (Color 2)</b>																	
DG Brown (K6053)	8.81	0.00758	62.500	5.00%	7.00%	0.00%	0.00%	1.70%	0.00%	0.00%	0.914	1.279	0.000	0.000	0.311	0.000	0.000
Toluene	7.25	0.00531	62.500	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.000	0.000	0.000	10.529	0.000	0.000	0.000
											<b>0.914</b>	<b>1.279</b>	<b>0.000</b>	<b>10.529</b>	<b>0.311</b>	<b>0.000</b>	<b>0.000</b>
<b>Individual Total</b>											<b>22.8</b>	<b>1.56</b>	<b>0.713</b>	<b>51.9</b>	<b>5.77</b>	<b>0.357</b>	<b>0.000</b>
<b>Overall Total</b>											<b>83.2</b>						

**METHODOLOGY**

**Worst case single HAP limited to less than 10.0 tons per year**  
**Total HAPs limited to less than 25.0 tons per year**

HAPS emission rate (tons/yr) = Density (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

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**Company Name:** Heartland Automotive, LLC  
**Address City IN Zip:** 300 South Warren Drive, Greencastle, Indiana 46135  
**Part 70 SSM:** 133-15489  
**Plt ID:** 133-00027  
**Reviewer:** Edward A. Longenberger  
**Date:** January 23, 2002

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
<b>Adhesive Booth (AB-1)</b>																
<b>Doors</b>																
Con-bond 330	9.05	34.96%	32.4%	2.5%	32.4%	67.56%	0.00240	225.000	0.34	0.23	0.12	2.96	0.539	3.48	0.3	75%
<b>Panels</b>																
Con-bond 330	9.05	34.96%	32.4%	2.5%	32.4%	67.56%	0.00149	56.250	0.34	0.23	0.02	0.458	0.084	0.539	0.3	75%
<b>Uppers</b>																
Con-bond 330	9.05	34.96%	32.4%	2.5%	32.4%	67.56%	0.00083	225.000	0.34	0.23	0.042	1.02	0.186	1.201	0.3	75%
<b>V.E.</b>																
Con-bond 330	9.05	34.96%	32.4%	2.5%	32.4%	67.56%	0.00259	225.000	0.34	0.23	0.13	3.18	0.581	3.750	0.3	75%
PM									Control Efficiency		90.00%					
<b>State Potential Emissions</b>									<b>Uncontrolled</b>		<b>0.317</b>	<b>7.62</b>	<b>1.39</b>	<b>8.97</b>		
<b>Add worst case coating to all solvents</b>									<b>Controlled</b>		<b>0.317</b>	<b>7.62</b>	<b>1.39</b>	<b>0.897</b>		

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)

Total = Worst Coating + Sum of all solvents used